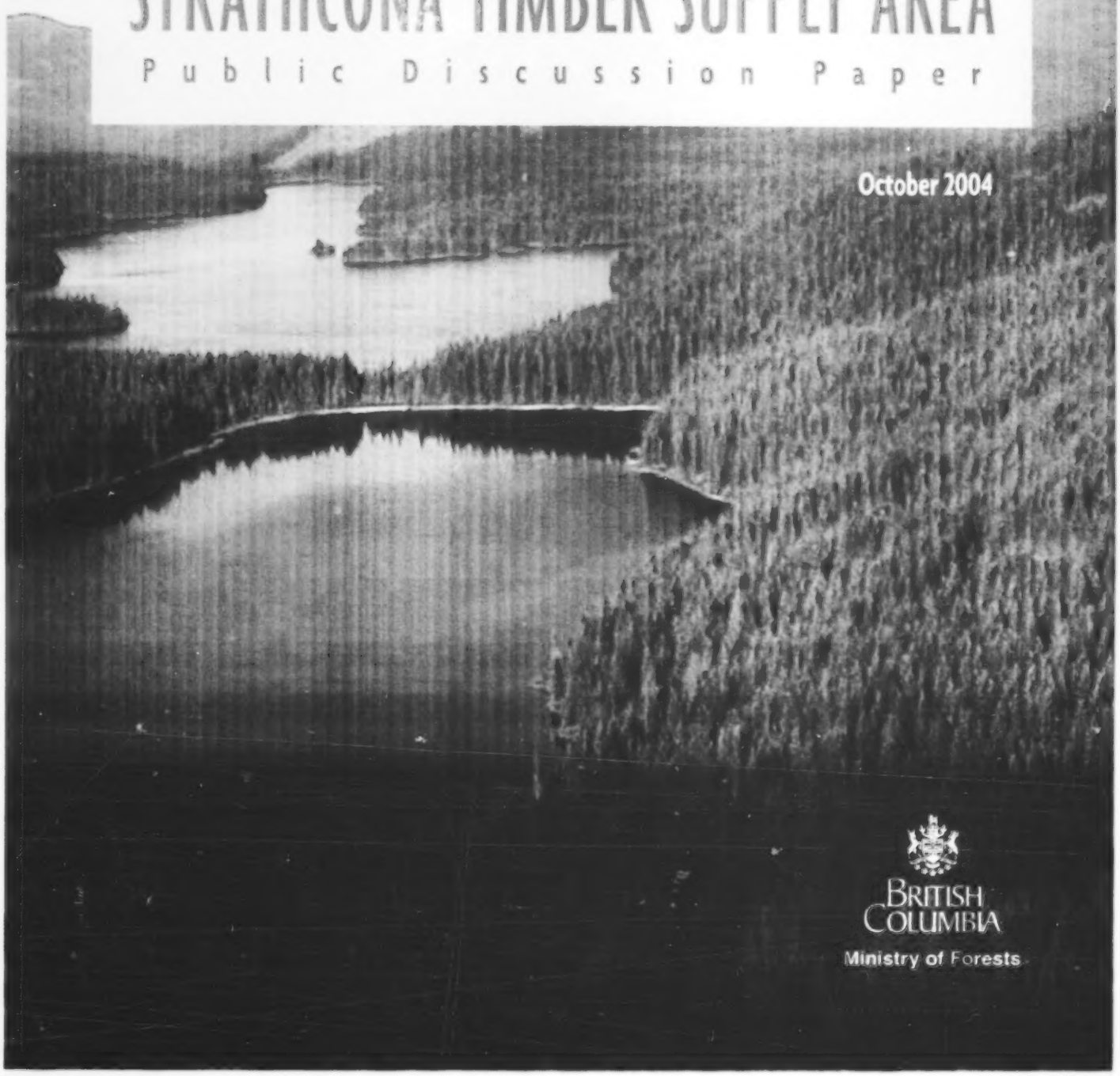
Timber Supply Review

STRATHCONA TIMBER SUPPLY AREA

Public Discussion Paper

October 2004



BRITISH COLUMBIA
Ministry of Forests

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Introduction

The British Columbia Ministry of Forests regularly reviews the timber supply* for all timber supply areas* (TSAs) and tree farm licences* (TFLs) in the province. This review examines the impacts of current forest management practices on the timber supply, economy, environment and social conditions of the local area and the province. Based on this review, if necessary, the chief forester will determine a new allowable annual cut (AAC) for the Strathcona TSA.

By law, the chief forester must review and set new AACs for all 37 TSAs and 34 TFLs every five years. The chief forester can postpone a timber supply review for up to five more years if the annual cut level is not expected to change significantly. The chief forester may also set a new harvest level earlier than five years to deal with abnormal situations such as damage from severe wildfires or catastrophic insect infestations.

***Timber supply** - the amount of timber that is forecast to be available for harvesting over a specified time period, under a particular management regime.

***TSA** - an integrated resource management unit established in accordance with Section 7 of the Forest Act.

***TFL** - provides rights to harvest timber, and outlines responsibilities for forest management, in a particular area.

***AAC** – the rate at which timber is made available for harvesting (usually for a five-year period) in response to social, economic and environmental considerations.

The objectives of the Timber Supply Review are to:

- **Examine** relevant forest management practices, public input, and economic, environmental and social factors;
- **Set a new AAC** for the next five years; and
- **Identify information** to be improved for future timber supply reviews.

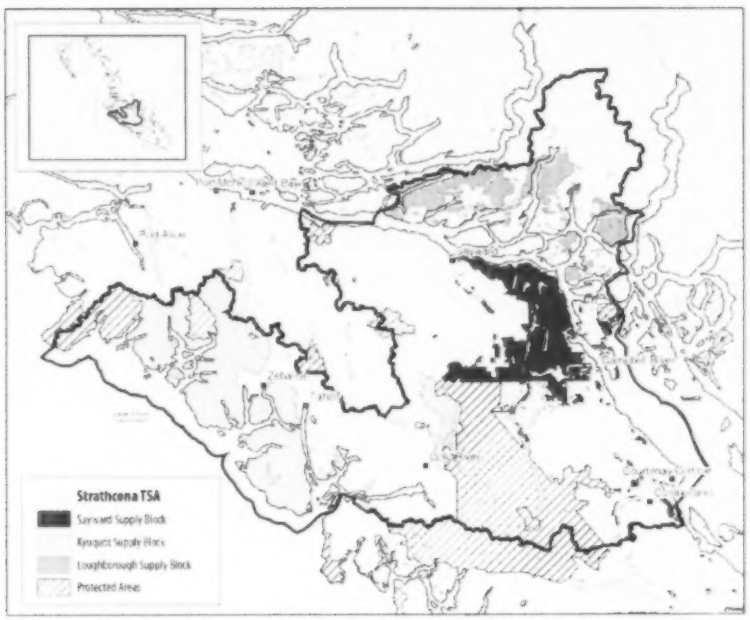
Timber Supply Review in the Strathcona TSA

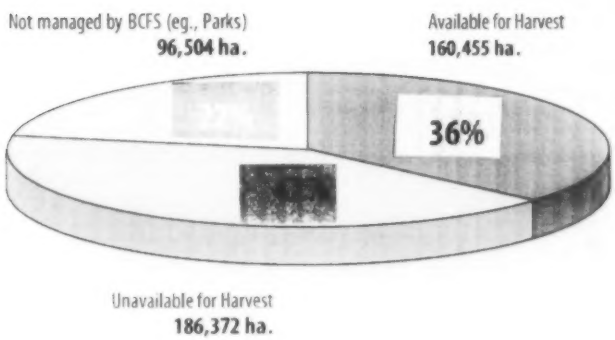
The B.C. Ministry of Forests has completed the 2004 Strathcona TSA Analysis Report, which is summarized in this discussion paper. This discussion paper is intended to provide British Columbians with an overview of the timber supply review process and harvest level forecasts for the Strathcona TSA, and to encourage them to provide comments during a 60-day public review period. Public comments will be accepted until December 13, 2004.

Before setting a new AAC, the chief forester will review all relevant reports and public input. The chief forester will explain the AAC determination in a rationale statement that will be available to the public. Following the release of the AAC determination by the chief forester, the minister of forests will apportion the AAC to the various licences and programs.

Description of the TSA

The Strathcona TSA is located on central Vancouver Island and adjacent areas on the B.C. coastal mainland. It is administered by the Campbell River Forest District. The TSA covers approximately 705,000 hectares and includes the communities of Campbell River, Courtenay, Comox, Gold River, Tahsis, Zeballos, Sayward, Cumberland and Kyuquot. In 2001, the population of the forest district was about 92,000, down about 1.7 per cent from 1996.





Forest land resources

Numerous natural resources are associated with the forest land base. In the Strathcona TSA, these include forest products, significant wildlife habitat, and recreation and tourism amenities.

Due to the variation in topography and climate, the Strathcona TSA contains one of the richest and most diverse arrays of wildlife in Canada. More than 300 species of migratory and resident birds, 45 species of mammals and 13 species of amphibians and reptiles occur in the TSA. The sheltered, nutrient-rich estuaries provide critical habitat for many species, and the many rivers and streams of the TSA support populations of salmon, trout, char and steelhead.

Recreational and tourism values and uses are high due to exceptional fishing and boating opportunities, spectacular natural scenery, and the presence of several provincial parks.

Priority wildlife species in the timber supply area under the B.C. Identified Wildlife Management Strategy are northern goshawk, coastal tailed frog, red-legged frog, great blue heron, grizzly bear, Keen's long-eared myotis and marbled murrelet.

As Figure 1 shows, about 160,000 hectares of the Strathcona TSA, or 36 per cent of the productive forest land, is considered available for harvesting.

Figure 1. Breakdown of the productive forest for the Strathcona TSA

First Nations

Fourteen First Nations, 10 of which are located in the TSA, have territorial interests in the Strathcona TSA. Four treaties, representing eight First Nations, are currently being negotiated. Treaties are currently being negotiated with the Sliammon First Nation, Homalco First Nation, the Hamatla Treaty Society (Campbell River, Cape Mudge, Comox, Tlowitsis, and Kwiakah First Nations) and the Maa-nulth First Nations (Huu-ay-aht First Nations, Uchucklesaht Tribe, Ka:'yu:'k't'h'/Che:k:tles7et'h' Nation, Toquaht Nation, and Ucluelet First Nation). The Maa-Nulth First Nations are negotiating a final agreement after signing an agreement in principle in October 2003.

Issues of concern identified by various First Nations include access to tenure, the impact of logging on land selection and fisheries habitat, the establishment of sustainable harvest levels by individual First Nation territory, access to high quality red and yellow cedar for traditional and cultural uses, and the protection of an economically viable forestry base that will be accessible in the post-treaty environment.

Land-use planning

The Vancouver Island Land Use Plan covers the Vancouver Island portions of the TSA. The Sayward Landscape Unit Plan, which covers a significant area on the east coast of Vancouver Island, was approved in 2003 and has established objectives for values such as biodiversity, wildlife, fisheries, timber, recreation, visual quality and drinking water.

The Central Coast Land and Resource Management Planning process includes the Loughborough Supply Block in the Strathcona TSA. Earlier this year, the planning table submitted recommendations that are consistent with the principles of ecosystem-based management. The B.C. and First Nations governments have begun government-to-government discussions that will lead to draft land use plans in this region.

Current allowable annual cut

As part of the last timber supply review, the chief forester set the allowable annual cut in the Strathcona TSA at 1,278,000 cubic metres, effective January 1, 2000, a 10 per cent reduction from the 1996 determination of 1,420,000 cubic metres.

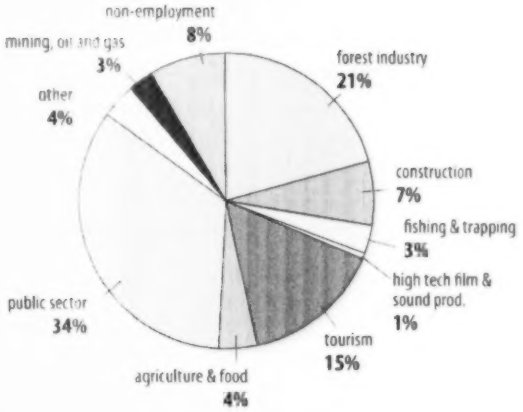


Figure 2. Total employment by sector, Campbell River Forest District, 2001.

Source: 2001 Economic Dependency Tables for Forest Districts, BC STATS

Socio-economic profile

Regional economy

Economic dependency estimates developed by BC STATS show that forestry accounts for about 21 per cent of total employment in the Campbell River Forest District, and the public sector accounts for about 34 per cent. Travel and tourism-related employment, including accommodation, and parts of food, retail trade and other sectors, account for about 15 per cent of total employment. From 1995 to 2000, the labour force in the district declined by about five per cent, and direct employment in forestry declined by more than 16 per cent.

Employment income is a good indicator of a sector's contribution to the economy. For example, forestry provides 21 per cent of total employment and contributes 20 per cent of basic income. The public sector, with 34 per cent of total employment, contributes 26 per cent of income, and the tourism sector, with 15 per cent of total employment, contributes seven per cent. The spending power of the district's large retirement population is reflected by the fact that non-employment-related income, or jobs that rely on spending related to pension and investment income, employment insurance, and other transfer payments, accounts for more than a third of the total income and eight per cent of the total employment.

Table 1 illustrates the projected contribution of the forest industry associated with the Strathcona TSA timber harvest to both the regional and provincial economies. Figures in this table were calculated using the projected base case harvest forecast in the analysis report and reflect the average level of employment that the current AAC can support.

Table 1. Employment and income associated with base case harvest forecast

Direct employment (person-years)	652	1,674
Total employment (person-years)	1,143	3,770
Total employment income ($2001 millions/year)	37.3	114.2
Provincial gov't revenues ($2001 millions/year)	N/A	29.6

Timber supply forecasts

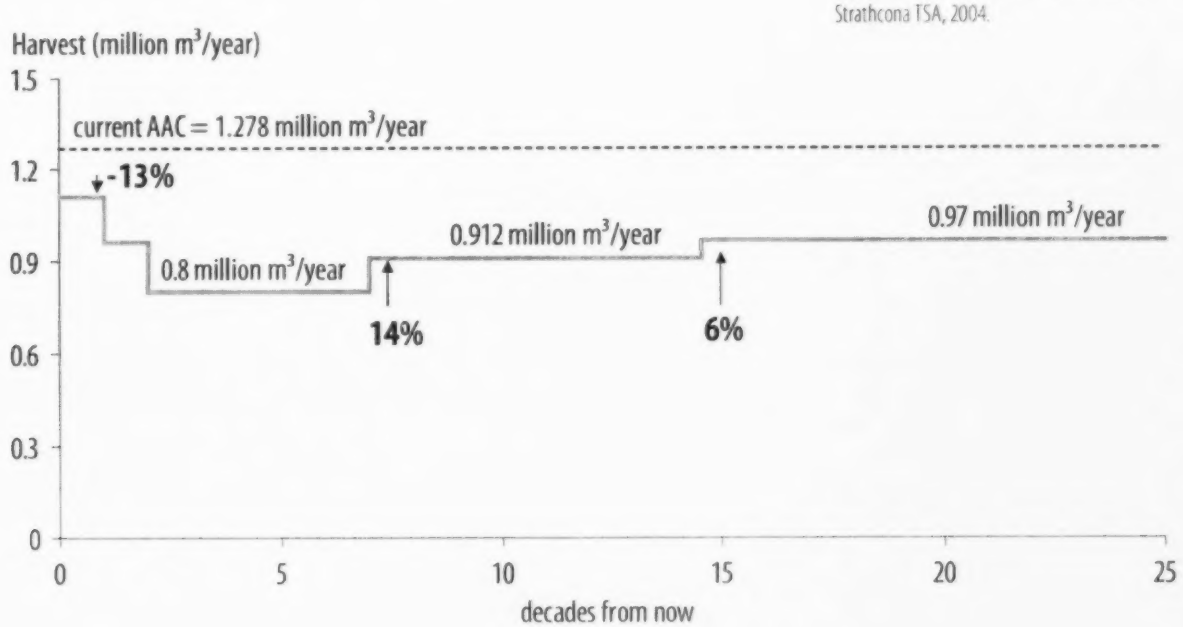
A computer model was used to project several possible timber supply forecasts for the next 250 years. The base case forecast illustrates the effect of current forest management practices on timber supply, using the best available information. The base case forecast is not a recommendation for an AAC, but rather it is one of many sources of information the chief forester will consider when setting the AAC.

Figure 3 shows the base case harvest forecast and suggests that the current AAC of 1.278 million cubic metres a year will need to be reduced in the short term to enable a measured transition to the medium-term harvest level of 800,000 cubic metres a year. The base case projects a harvest level of about 1.117 million cubic metres a year for 10 years followed by two reductions of about 150,000 cubic metres a decade, or about 12 per cent of the current AAC.

Seventy years from now, a modest increase of 14 per cent is possible as more productive managed stands are available for harvesting, with an additional increase of six per cent 140 years from now due to the benefits from tree improvement activities, where exceptional trees are used as a seed source for planted seedlings.

The base case harvest forecast indicates a decline in timber supply consistent with previous analyses shown for this unit. The most important factors contributing to this are revised assumptions about the minimum age when a stand can be harvested and improved riparian mapping that has reduced the size of the timber harvesting land base.

Figure 3. Base case harvest forecast for the Strathcona TSA, 2004.



Sensitivity analyses: examining uncertainty

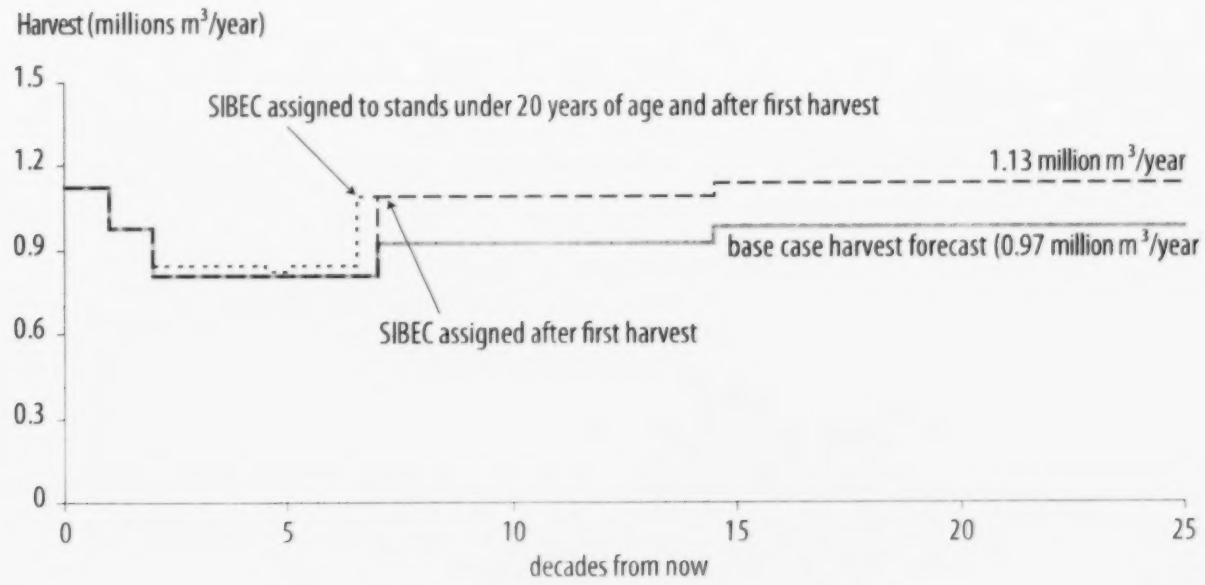
Because forests are complex and constantly changing and because society's expectations of the uses from these forests vary from time to time, timber supply analysts assess how the timber supply might be affected by uncertainties in inventory information and management practices. These uncertainties are generally examined through what are called sensitivity analyses, which the chief forester will consider in determining an AAC.

The sensitivity analyses are useful for assessing how uncertainties and risks, or any changes in information, might affect timber supply. In some cases, a small change in a management assumption could have a large impact on timber supplies while in other cases an apparently significant change may only have a minor impact on timber supplies.

Uncertainty about tree growth rates

One way to determine how quickly trees will grow is to use the forest inventory to interpret a site's productivity. However, in many stands in B.C., research suggests that actual site productivity may be higher than indicated by the forest inventory. An alternative approach to estimating productivity is to link ecosystem mapping with site productivity (called SIBEC). The Research Branch of the Ministry of Forests maintains and updates a set of these productivity estimates. Since detailed ecosystem mapping has been completed on about half of the Strathcona TSA, it can be linked to these alternative productivity estimates. As shown in Figure 4, using these SIBEC estimates suggests that timber supply may be significantly underestimated in the long term.

Figure 4. The potential impact on timber supply of site productivity estimates using SIBEC

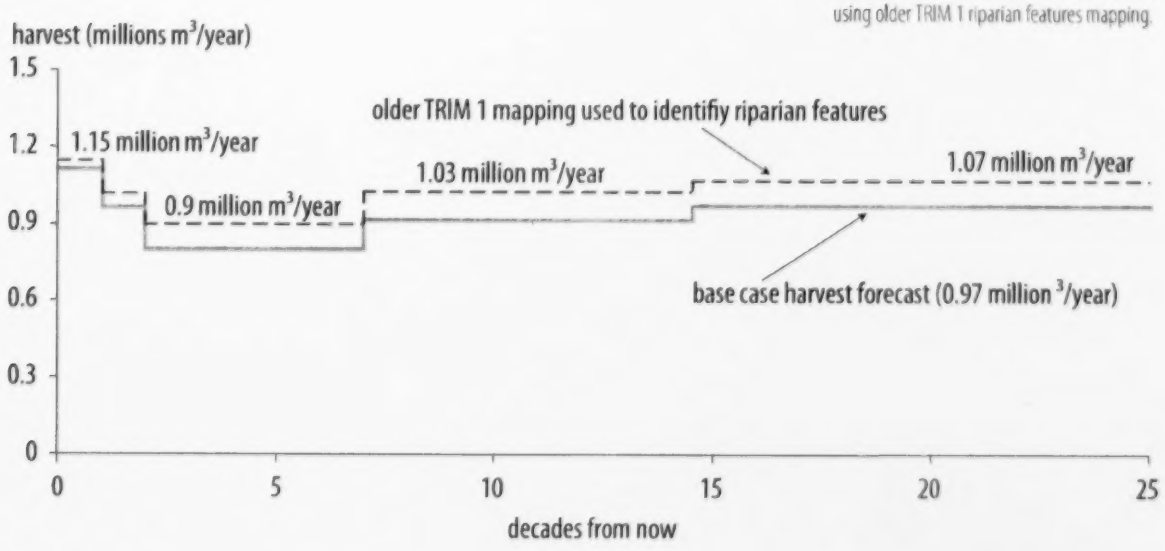


Uncertainty about the area required to meet riparian management considerations

The single largest change in data between the current analysis and the previous analysis is the area assumed to be required to meet riparian management objectives. Since classified stream information is not readily available for most of B.C., analysts have used slope to generate a classification for riparian information so they can apply the correct buffer. For the base case, the most detailed riparian features mapping available was used (TRIM 2). While this mapping shows all likely water features, it does not distinguish between continuously flowing streams and areas that are dry for most of the year.

In this sensitivity analysis, less detailed but more explicit riparian features mapping (TRIM 1) was used, which can distinguish which streams are continuously flowing. Applying this assumption increased the timber harvesting land base by about nine per cent, making the riparian contribution similar to the last timber supply analysis. The sensitivity analysis shown in Figure 5 accounts for the fact that if there is less area in riparian buffers, more wildlife tree patches will be required to meet stand-level biodiversity objectives.

Figure 5. The effect on the harvest forecast of using older TRIM 1 riparian features mapping.



Implications of changes in the AAC

Community Implications

The implication of changes in the AAC for local communities is an important consideration in the timber supply review. Since 1993, the Strathcona TSA allowable annual cut has been declining, and employment in the logging and forestry services sector has also declined. Over the next two decades, the timber supply from the Strathcona TSA is expected to support about 160 fewer person years of direct and indirect employment within the TSA and about 410 fewer person-years of direct and indirect employment provincewide.

Your input is needed

Public input is a vital part of establishing the allowable annual cut. Feedback is welcomed on any aspect of this discussion paper, the 2004 Strathcona TSA Analysis Report and other issues related to the timber supply in the Strathcona TSA. Forest Service staff would be pleased to answer questions to help you prepare your response. Please send your comments to the forest district manager at the address below. ***Your comments will be accepted until December 13, 2004.***

You may identify yourself on the response if you wish. If you do, you are reminded that responses will be subject to the Freedom of Information and Protection of Privacy Act and may be made public. If the responses are made public, personal identifiers will be removed before the responses are released.

For more information contact and/or mail your comments to:

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http://www.for.gov.bc.ca/hts/

Background Information Regarding TSR

The Chief Forester's Responsibility

Determining the allowable annual cuts (AACs) for public forest lands in British Columbia is the responsibility of the province's chief forester. In this lengthy and complex process, the chief forester considers technical reports, analyses and public input, as well as government's social and economic objectives.

This responsibility is required by legislation in the Forest Act, Section 8. It states that the chief forester shall specifically consider the following factors:

1. The rate of timber production that may be sustained from the area, taking into account:

- the composition of the forest and its expected rate of growth
- the time that it will take the forest to become re-established
- silviculture treatments, including reforestation
- standards of timber utilization
- constraints on the amount of timber that may be produced due to use of the forest for other purposes.

2. The short- and long-term implications to the province of alternative rates of timber harvesting from the area.

3. The economic and social objectives of the Crown for the area, region and province – as expressed by the minister of forests.

4. Abnormal insect or disease infestations, and major salvage programs planned for the timber on the area.

Some of these factors can be measured and analyzed – others cannot. Ultimately, the chief forester's determination is an independent professional judgment based on the best available information. By law, the chief forester is independent of the political process, and is not directed by the minister of forests when determining AACs. In these determinations, the chief forester considers relevant information from all sources.

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